Database

110

Back-End Analyzer

Front-End Presentation

119

105

Log

Log

Log

113

114

115

Process

Thread

Thread
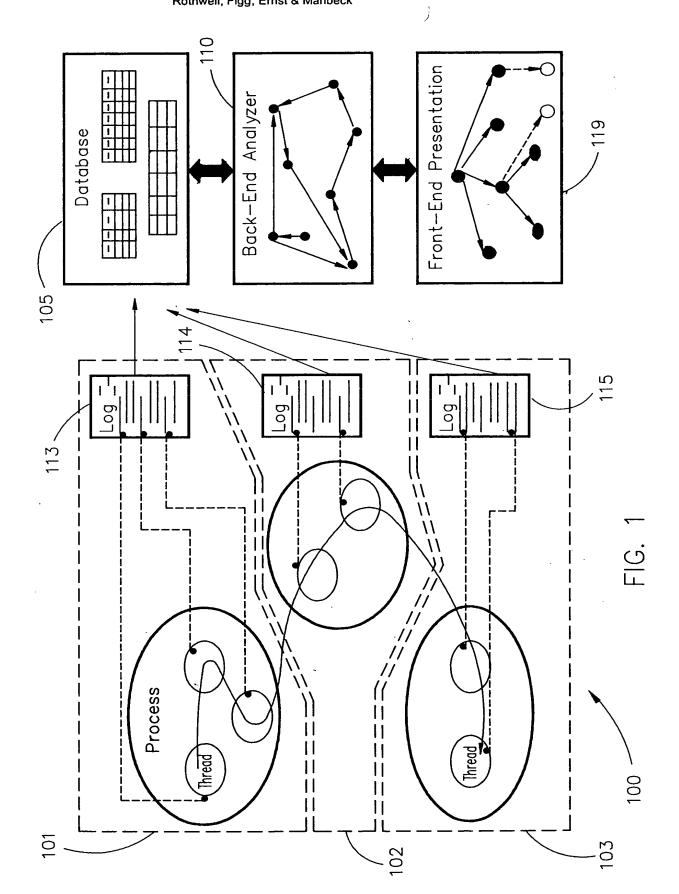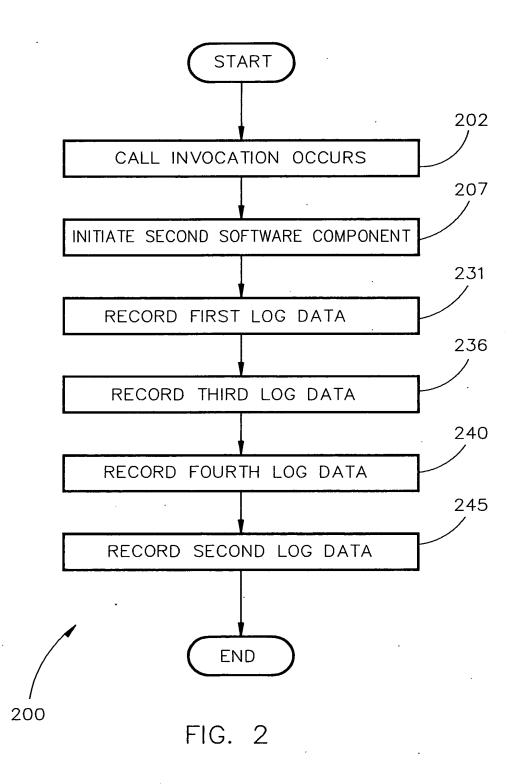
101

102

103

100

FIG. 1

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```
                    ┌──────────┐
                    │  START   │
                    └──────────┘
                         │
                         ▼                            202
         ┌──────────────────────────────────┐
         │     CALL  INVOCATION  OCCURS      │
         └──────────────────────────────────┘
                         │                            207
                         ▼
         ┌──────────────────────────────────┐
         │  INITIATE SECOND SOFTWARE COMPONENT │
         └──────────────────────────────────┘
                         │                            231
                         ▼
         ┌──────────────────────────────────┐
         │     RECORD  FIRST  LOG  DATA      │
         └──────────────────────────────────┘
                         │                            236
                         ▼
         ┌──────────────────────────────────┐
         │     RECORD  THIRD  LOG  DATA      │
         └──────────────────────────────────┘
                         │                            240
                         ▼
         ┌──────────────────────────────────┐
         │     RECORD  FOURTH  LOG  DATA     │
         └──────────────────────────────────┘
                         │                            245
                         ▼
         ┌──────────────────────────────────┐
         │     RECORD  SECOND  LOG  DATA     │
         └──────────────────────────────────┘
                         │
                         ▼
                    ┌──────────┐
                    │   END    │
                    └──────────┘
```

200

FIG. 2

Applicant: Jun Li et al.
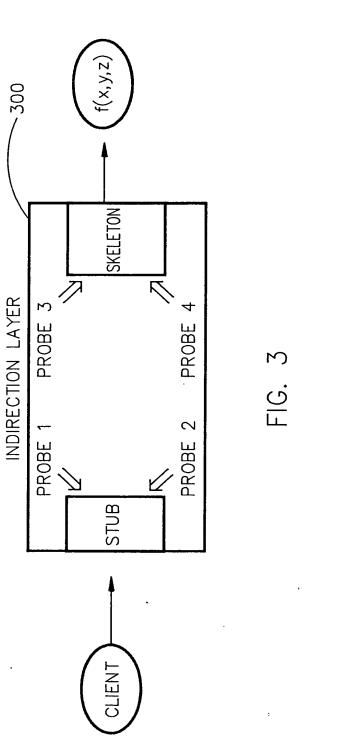"Run-Time Monitoring in Component-B...
Systems"
Atty. Docket No. 10007965 (N1424-011)
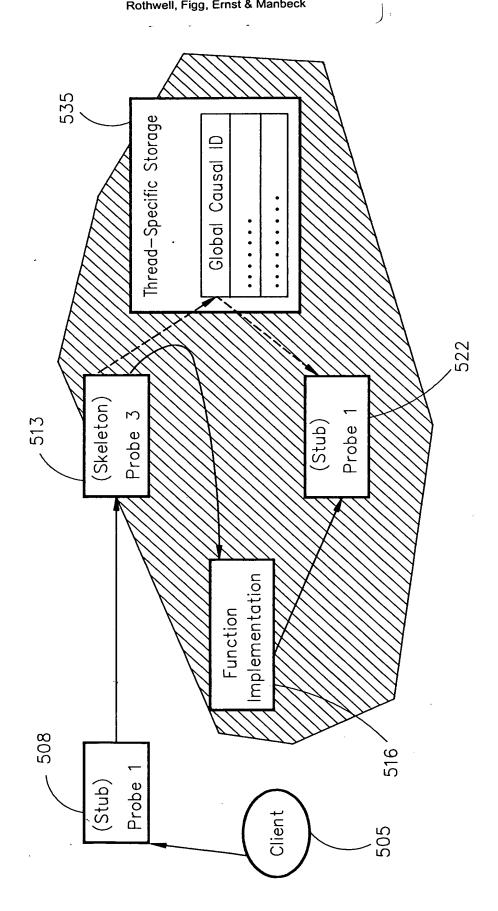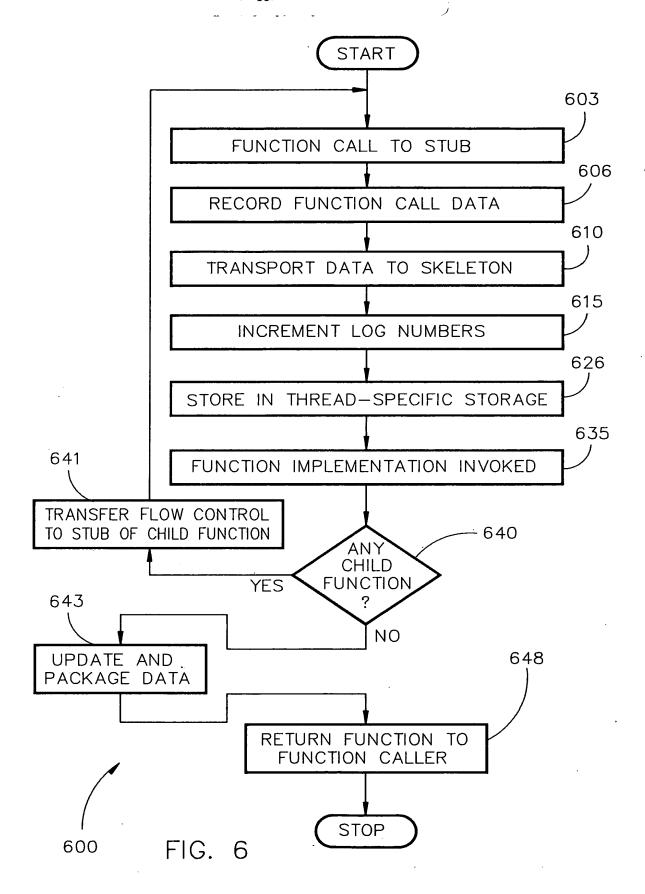Drawing Page 3 of 10
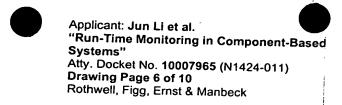Rothwell, Figg, Ernst & Manbeck

FIG. 3

FIG. 4

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FIG. 5

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START

FUNCTION CALL TO STUB — 603

RECORD FUNCTION CALL DATA — 606

TRANSPORT DATA TO SKELETON — 610

INCREMENT LOG NUMBERS — 615

STORE IN THREAD—SPECIFIC STORAGE — 626

FUNCTION IMPLEMENTATION INVOKED — 635

641 — **TRANSFER FLOW CONTROL TO STUB OF CHILD FUNCTION**

ANY CHILD FUNCTION ? — 640

YES

NO

643 — **UPDATE AND PACKAGE DATA**

RETURN FUNCTION TO FUNCTION CALLER — 648

STOP

600

FIG. 6

```
              ┌─────────────┐
              │    START    │
              └──────┬──────┘
                     │
                     ▼
     ┌───────────────────────────────────┐   702
     │  RETRIEVE  THREAD — TRANSPORTABLE  │
     │             LOG DATA               │
     └──────────────────┬────────────────┘
                        │
                        ▼
     ┌───────────────────────────────────┐   706
     │  PACKAGE THREAD — TRANSPORTABLE    │
     │  LOG DATA WITH CHILD THREAD        │
     │         CREATION DATA              │
     └──────────────────┬────────────────┘
                        │
                        ▼
     ┌───────────────────────────────────┐   730
     │    TRANSPORT  TO  CHILD  THREAD    │
     └──────────────────┬────────────────┘
                        │
                        ▼
     ┌───────────────────────────────────┐   742
     │    RECORD  DATA  TO  THREAD        │
     │       TABLE  OF  CHILD             │
     └──────────────────┬────────────────┘
                        │
                        ▼
              ┌─────────────┐
              │    STOP      │
              └─────────────┘

        700
```
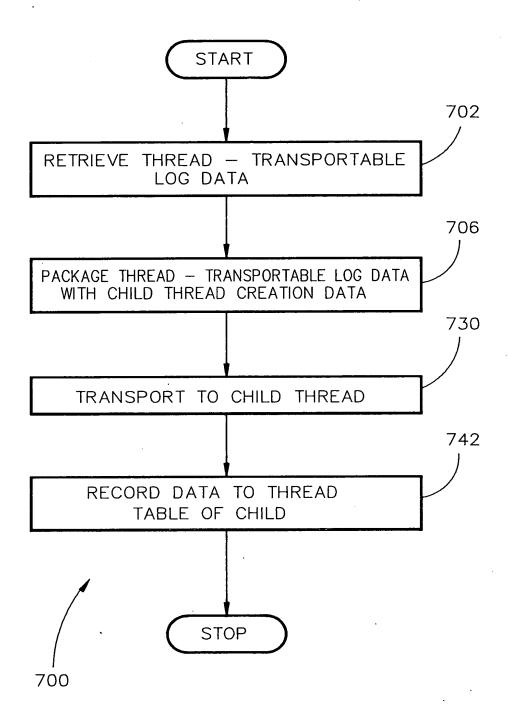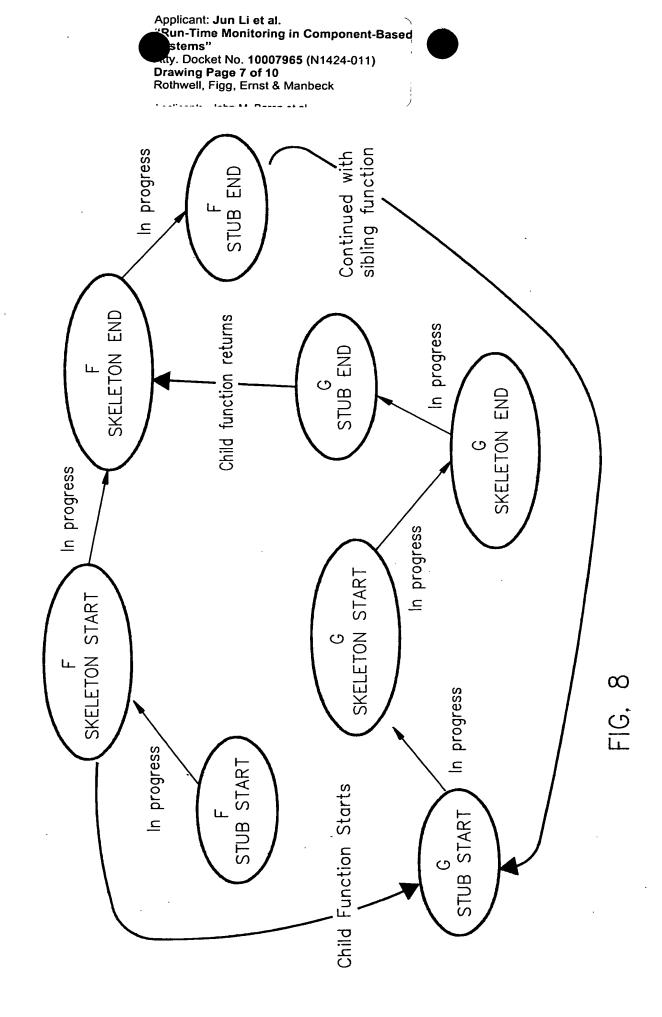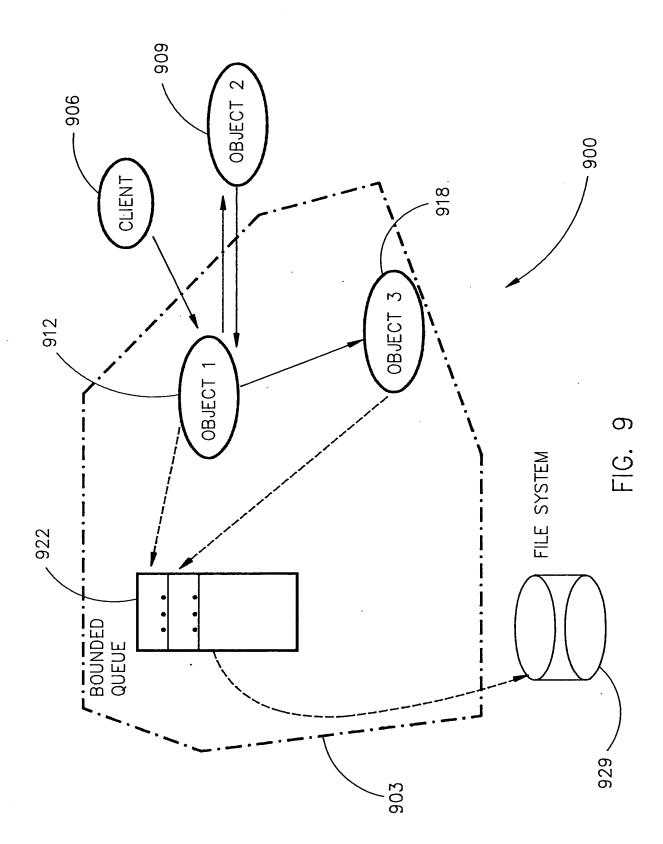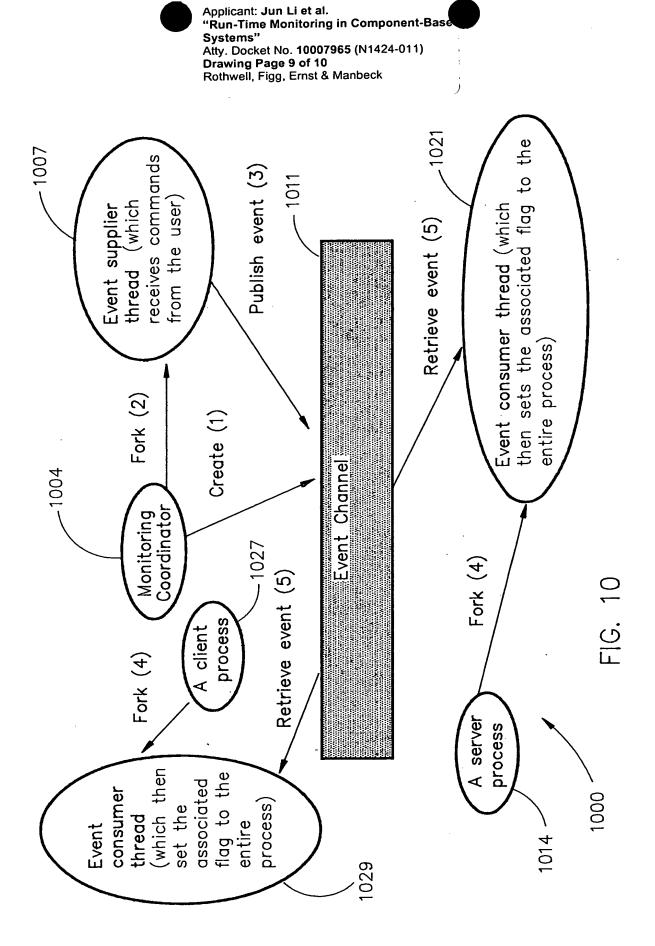
FIG. 7

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FIG. 8

OBJECT 2   909

CLIENT   906

OBJECT 1   912

OBJECT 3   918

900

BOUNDED QUEUE   922

FILE SYSTEM   929

903

FIG. 9

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FIG. 10

FIG. 11